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6 **UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WASHINGTON**

7 HANFORD CHALLENGE)
and) Civil Case No. 4:15-cv-5086
8 UNITED ASSOCIATION OF)
PLUMBERS AND STEAMFITTERS) COMPLAINT FOR
9 LOCAL UNION 598,) DECLARATORY
Plaintiffs,) AND INJUNCTIVE RELIEF
10 v.) UNDER 42 U.S.C. §
11) 6972(a)(1)(B).
ERNEST MONIZ, in his official)
12 capacity as Secretary,)
UNITED STATES DEPARTMENT)
13 OF ENERGY,)
and)
14 WASHINGTON RIVER)
PROTECTION SOLUTIONS, LLC,)
15 Defendants.)
16

17 **COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF**

18 Plaintiffs Hanford Challenge and the United Association of Plumbers and
19 Steamfitters, Local Union 598 (collectively referred to as “Citizens”), through the
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undersigned counsel, complain of Defendants, Secretary Ernest Moniz, in his official capacity as Secretary of the United States Department of Energy (USDOE), and Washington River Protection Solutions, LLC (WRPS), as follows:

I. INTRODUCTION

1. This is a civil action for declaratory and injunctive relief, and costs and fees under the citizen suit provisions of the Solid Waste Disposal Act, amended as the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq.* (“RCRA”), specifically section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B).

2. As detailed below, Citizens allege that USDOE and WRPS have contributed and continue to contribute to the past and present handling, storage, treatment, transportation, and/or disposal of solid and hazardous waste at the Hanford Nuclear Site in such a manner that may present an imminent and substantial endangerment to health and the environment in violation of RCRA and as is actionable under Section 7002(a) of RCRA. 42 U.S.C. § 6972(a)(1)(B).

3. Citizens seek declaratory relief establishing that WRPS’ and USDOE’s waste management practices at the Hanford Nuclear Site, and more specifically, at the High-Level Nuclear Waste Tank Farms (Tank Farms) located in the 200 East and 200 West areas of that Federal Facility presently owned by USDOE, may present an imminent and substantial endangerment.

1 2014. Citizens' notice letter is attached as Exhibit A and is incorporated by
2 reference herein.

3 8. More than ninety days have passed since Citizens provided their notice
4 of intent to file suit to Defendants and others.

5 9. The endangerment complained of in the notice are continuing at this
6 time or are reasonably likely to continue, because Defendants have failed to take
7 corrective actions sufficient to abate the endangerment conditions.

8 10. Neither the EPA nor the State of Washington have commenced or are
9 diligently prosecuting a civil or criminal action to abate the imminent and
10 substantial endangerment to health and the environment alleged in our notice of
11 intent letter. Nor is the EPA, under the Comprehensive Environmental Response,
12 Compensation and Liability Act, engaged in any of the actions described in 42
13 U.S.C. 6972(a)(2)(B) with respect to the conditions described herein.

14 **III. VENUE**

15 11. Venue is proper in this Court under Section 7002(a) of RCRA, 42
16 U.S.C. § 6972(a), because the USDOE's Hanford Nuclear Site is located within
17 the Eastern District of Washington and the alleged endangerment occurred and
18 continues to occur within the Eastern District of Washington. Venue is also proper
19 in this Court pursuant to 28 U.S.C. § 1391(e).

IV. PLAINTIFFS

12. Hanford Challenge is a non-profit, public interest, environmental and worker advocacy organization located at 219 First Avenue S, Suite 310, Seattle, WA 98104. Hanford Challenge is an independent 501(c)3 membership organization incorporated in the State of Washington and dedicated to creating a future for Hanford that secures human health and safety, advances accountability, and promotes a sustainable environmental legacy.

13. Hanford Challenge has members who work at the Hanford Site and within the Tank Farms who are at risk of imminent and substantial endangerment due to Defendants' handling, storage, treatment, transportation, and disposal of Hanford's solid and hazardous waste. Other members of Hanford Challenge work or recreate near Hanford, where they may also be affected by vapor exposures. All members have a strong interest in ensuring the safe and effective cleanup of the nation's most toxic nuclear site for themselves and for current and future generations, and who are therefore affected by conditions that endanger human health and the environment and are actionable under Section 7002(a) of RCRA. 42 U.S.C. § 6972(a)(1)(B).

14. Hanford Challenge has members who have worked and continue to work in and around Hanford's Tank Farms who have experienced acute and/or chronic illnesses as a result of exposure to toxic vapors from Hanford's high-level

1 waste tanks. The intent of this action is, among other things, to abate conditions
2 that continue to occur at the Tank Farms that present an imminent and substantial
3 endangerment to health and the environment affecting Hanford Challenge's
4 members and others.

5 15. Additionally, Hanford Challenge's members who have gotten sick as a
6 result of exposure to vapors from Hanford tanks and those who still work in and
7 around the tank farms have a distinct interest in and need for medical monitoring
8 and support.

9 16. The United Association of Plumbers and Steamfitters, Local 598 is a
10 local labor organization. Local 598 is a chapter of the United Association of
11 Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the
12 United States, Canada and Australia (UA) with offices at 1328 Road 28, Pasco,
13 WA 99301.

14 17. Local 598 has more than 70 members who are regularly dispatched to
15 work in and around the Hanford Tank Farms on the tanks and tank systems,
16 performing a variety of activities including construction and maintenance work.

17 18. Many of Local 598's members who have worked in Hanford's Tank
18 Farms have experienced both acute and/or chronic illnesses as a result of exposure
19 to toxic vapors emanating from the wastes in the tanks. Local 598 members who
20 are dispatched to jobs in and around the Tank Farms are at risk of imminent and

1 substantial endangerment due to Defendants' handling, storage, treatment,
2 transportation, and disposal of Hanford's solid and hazardous waste. Additionally,
3 Local 598 members who have gotten sick as a result of exposure to vapors from
4 Hanford tanks and those who still work in and around the tank farms have a
5 distinct interest in and need for medical monitoring and support.

6 19. For example, Pipefitter, Mike Cain is a member of Local 598. Mr.
7 Cain has worked in and around Hanford's Tank Farms for over 30 years and
8 continues to do so. Mr. Cain has experienced symptoms from vapor exposures
9 while working in and around Hanford's Tank Farms.

10 20. The members of these organizations who are currently at risk of
11 exposure to Hanford's toxic vapors would benefit directly from the redress of the
12 imminent and substantial endangerment alleged in this complaint.

13 21. Plaintiffs were and are "persons" within the meaning of Section
14 1004(15) of RCRA, 42 U.S.C. § 6903(15).

15 **V. DEFENDANTS**

16 22. Defendant Ernest Moniz is Secretary of USDOE. USDOE owns the
17 Hanford Nuclear Site which is operated under contract by private companies.

18 23. Defendant Washington River Protection Solutions, LLC (WRPS) is a
19 limited liability corporation incorporated in the state of Delaware and owned by
20

1 AECOM and Energy Solutions. WRPS' primary place of business is 2425 Stevens
2 Center Place, Richland, WA 99352.

3 24. WRPS is the prime contractor with USDOE for the Tank Operations
4 Contract under which it manages and integrates a range of work to support the
5 cleanup of the Hanford Site. WRPS has been USDOE's prime contractor for tank
6 operations responsible for treatment, storage, and retrieval of Hanford tank waste
7 since 2008.

8 25. Defendants WRPS and DOE were and are "persons" within the
9 meaning of Section 1004 (15) of RCRA, 42 U.S.C. § 6903(15). In addition,
10 USDOE is the past generator of the waste in the tank farms that is the subject of
11 this complaint.

12 VI. LEGAL AND REGULATORY BACKGROUND

13 26. Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B), allows
14 citizens to bring suit in order to stop an "imminent and substantial endangerment
15 to health or the environment." It provides that any person may commence an
16 action against "any person [. . .] including any past or present generator, past or
17 present transporter, or past or present owner or operator of a treatment, storage, or
18 disposal facility, who has contributed or is contributing to the past or present
19 handling, storage, treatment, transportation, or disposal of any solid or hazardous
20

1 waste which may present an imminent and substantial endangerment to health or
2 the environment[.]”

3 27. Certain wastes and constituents at the Hanford Site are hazardous
4 wastes or hazardous constituents as defined by Section 1004(5) of RCRA, 42
5 U.S.C. 6903(5), and 40 CFR Part 261. There are also hazardous wastes or
6 hazardous constituents at the Hanford Site within the meaning of RCW 70.105 and
7 WAC 173-303.

8 28. Hanford tanks contain “Radioactive Mixed Waste” or “Mixed Waste”
9 that contains both hazardous waste subject to RCRA and/or HWMA (RCRA
10 Section 1004(5) and RCW 70.105.010(15)) and radioactive waste subject to the
11 Atomic Energy Act of 1954, as amended. In any event, all the wastes at issue are
12 solid waste as defined by Section 1004(27) of RCRA.

13 29. The Hanford Site constitutes a facility within the meaning of Sections
14 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924 and 6925, and RCW 70.105.

15 30. The Hanford Site includes certain hazardous waste treatment, storage,
16 and disposal units authorized to operate under Section 3005(e) of RCRA, 42
17 U.S.C. 6925(e).

18 31. The Hanford tanks are considered Treatment, Storage, and Disposal
19 Units (TSD) under RCRA.

20 32. USDOE is the present owner/operator of the Hanford Site.

1 33. WRPS is the present operator of the Tank Farms TSD Units, under
2 contract with USDOE.

3 34. In 1989, USDOE, EPA, and Washington State Department of Ecology
4 entered into a legally binding accord, the Tri-Party Agreement (TPA), to clean up
5 the Hanford Site.

6 35. Cleanup activities at the Hanford Federal Facility (EPA RCRA Site ID
7 Number WA7_89000_8967) are the joint responsibility of EPA Region 10 and the
8 Washington State Department of Ecology, Nuclear Waste Program (Ecology).

9 36. Hanford is a Federal Facility and the TPA is a corrective action order
10 under RCRA, an interagency agreement under Section 120 of the Comprehensive
11 Environmental Response, Compensation and Liability Act (CERCLA) 42 U.S.C.
12 9620 (Federal Facilities), and a consent order under the Washington State
13 Hazardous Waste Management Act of 1976 (Revised Code of Washington (RCW)
14 70.105).

15 37. Article VI.24 of the TPA declares that pursuant to Sec. 6001 of
16 RCRA, 42 U.S.C. 6961 (Application to Federal Facilities), USDOE is subject to
17 and must comply with RCRA and the Washington State Hazardous Waste
18 Management Act, RCW 70.105.

19 38. Hanford's TSD units are identified in Appendix B of the TPA, which
20 lists all of the High-Level Waste Tanks.

VII. FACTS

A. The Hanford Nuclear Site.

39. The 586-square-mile Hanford site is a legacy of World War II and the Cold War. In 1943, the federal government selected Hanford as a Manhattan Project site, to enrich plutonium for nuclear weapons. Major site activities included the fabrication of nuclear reactor fuel assemblies in the 300 Area, irradiation of the fuel assemblies in reactors in the 100 Areas, dissolution of fuel assemblies and chemical separations in the 200 Areas, and the storage of waste primarily in the 200 Area Tank Farms. Many of these tanks have leaked or are leaking high-level nuclear waste into the ground.

40. Since 1989, Hanford has become one of the world's largest environmental remediation projects as the USDOE develops new waste treatment and disposal technologies, transfers waste from leaking tanks, as well as demolishes buildings and contains waste from historical operations.

B. The Tank Farms.

41. Hanford produced most of the nation's supply of plutonium, which resulted in the nation's largest quantity of deadly high-level radioactive and chemical by-products, the most toxic of which are stored in underground tanks.

1 42. Hanford has 177 underground storage tanks that hold a total of 56
2 million gallons of high-level nuclear waste and toxic chemical waste. These tanks
3 are organized into eighteen areas, known as “Tank Farms,” and managed primarily
4 by USDOE contractor WRPS.

5 43. Under the Tank Operations Contract, WRPS conducts “operations and
6 construction activities necessary to store, retrieve and treat Hanford tank waste,
7 store and dispose of treated waste, and begin to close the Tank Farm waste
8 management areas to protect the Columbia River.” (See WRPS and USDOE Tank
9 Farm Contract accessible at <http://www.hanford.gov/?page=721>.)

10 **C. Tank Waste Contents and Toxic Vapors.**

11 44. Hanford Tanks contain solid and liquid wastes (many of which are
12 hazardous) as well as particulates, vapors, gases, and fumes that originate from
13 those wastes. The waste in many of the Hanford tanks is very hot from radioactive
14 decay and some of it is volatile.

15 45. For the purpose of this complaint, as in Citizens’ notice of intent letter,
16 the terms “vapor” or “vapors” are intended to include gases, fumes, and
17 particulates. A chemical that is either solid or liquid when at normal room
18 temperature and at normal pressure may turn into a vapor when heated sufficiently,
19 or when the pressure is increased. Vapors are gases and the terms are often used
20 interchangeably. Fumes come from particles that have evaporated from a solid

1 material. Fume or fumes often refers to vapors (gases), dusts and/or smoke given
2 off by a substance as a result of a chemical transformation such as reaction, heating,
3 explosion or detonation. A particulate is microscopic solid or liquid matter
4 suspended in the atmosphere.

5 46. Hanford's tanks release vapors (including particulates) which
6 originated from the solid waste in the tanks that cause an imminent and substantial
7 endangerment to health and the environment.

8 47. Over 1500 chemicals have been detected in the vapors contained
9 within Hanford's tank headspaces, any number of which can and do escape through
10 tank equipment.

11 48. The vapors in the tanks come from stored solid waste and are
12 temporarily trapped within the headspaces of the tanks before being emitted or
13 leaked to the atmosphere. Hanford's tanks do not have effective filters or systems
14 to capture or remove toxic vapors.

15 49. Newer double shell tanks actively vent headspace vapors through
16 stacks to the outside air. These 28 double-shell tanks have exhausters and HEPA
17 filters, however, these filters only remove particulates and do not remove all
18 chemical vapors.

1 50. Older single shell tanks have passive vents that unpredictably emit
2 vapors. Other openings in the tank system may also vent vapors, such as from
3 piping, cabinets, and when tanks are accessed directly through pits.

4 51. These toxic vapors are in the headspace of the tanks and seep out
5 during atmospheric conditions such as a temperature and pressure inversion; during
6 any type of waste disturbing activity such as pumping waste from leaking tanks;
7 when inserting cameras or equipment into tanks; and other times through pipes,
8 vents, filters or anywhere pressure can build and vapors can be released. Tanks
9 must vent to the atmosphere to prevent pressure buildup and possible explosion or
10 tank rupture.

11 52. The toxic chemicals found in the tanks, many of which are recognized
12 carcinogens, include ammonia, nitrous oxide, mercury, hydrocarbons, alcohols,
13 ketones, aldehydes, furans, phthalates, nitriles, amines, and nitrosamines. Many
14 more toxic vapors are known to be in the tanks, and have been measured in the tank
15 headspace at concentrations well above occupational exposure limits.

16 53. The notice letter referenced in paragraph 7 above describes in detail
17 the tank contents, exposure scenarios, history of exposures, and the ongoing
18 potential for imminent and substantial harm to humans and the environment from
19 Hanford's tank vapors and is incorporated herein by this reference.

20

D. Exposure to Tank Vapors.

54. The history of vapor exposures at Hanford goes back decades, and at least hundreds, if not thousands, of workers have been exposed to toxic vapors originating from Hanford's hazardous waste.

55. Hundreds of employees work in and around the Hanford Tank Farms on a daily basis around the clock. Pipefitters, construction workers, electricians, millwrights, nuclear chemical operators, health physics technicians, and others comprise the bulk of workers who routinely encounter potentially toxic vapors with inadequate or non-existent protective equipment.

56. USDOE and WRPS continue to deploy ineffective strategies to protect workers from exposure to toxic vapors (including gases, fumes, and particulates) that are capable of causing acute and chronic health effects, including brain damage, lung diseases, and cancers. Meanwhile, tank farm workers continue to experience symptoms and illnesses resulting from exposure to toxic vapors.

57. Some workers exposed to the tank vapors have suffered serious long-term health effects including brain damage, lung disease, nervous system disorders, and cancer.

58. NIOSH, USDOE, and various expert panels have filed reports on worker exposure to toxic vapors and particulates that assert Hanford's Industrial

1 Hygiene Program has been ineffective in protecting workers from toxic vapor
2 exposures.

3 59. On October 30, 2014, USDOE's Savannah River National Laboratory
4 released the Hanford Tank Vapor Assessment Report, commissioned by WRPS
5 (2014 TVAT Report). This report detailed numerous failings in Hanford's current
6 programs and processes designed to protect worker health and safety relative to
7 toxic vapor exposures. One conclusion of that report matches those of earlier
8 reports:

9 The ongoing emission of tank vapors, which contain a mixture of
10 toxic chemicals, is inconsistent with the provision of a safe and
11 healthful workplace free from recognized hazards...Management
12 must acknowledge the health risk associated with episodic releases of
13 tank vapors. While the ability to measure and document exposures
14 may currently be inadequate, workers are nonetheless being affected
15 by vapors on the tank farms. Acceptance of this observation should be
16 communicated to all internal and external stakeholders.

13 (See Department of Energy Savannah River National
14 Laboratory, Hanford Tank Vapor Assessment Report, October 30,
15 2014, SRNL-RP-2014-00791, Revision 0. (2014 TVAT Report).
Available at http://srnl.doe.gov/documents/Hanford_TVAT_Report_2014-10-30-FINAL.pdf.)

16 60. The 2014 TVAT Report identifies many potential adverse health
17 effects of acute vapor exposures, including nosebleeds, headaches, watery eyes,
18 burning skin, contact dermatitis, increased heart rate, difficulty breathing,
19 coughing, sore throats, expectorating, dizziness, and nausea.

1 61. Since 2014, over 50 individuals working in or around Hanford's tank
2 farms have experienced symptoms of exposure to toxic vapors from the waste
3 tanks. More than ten exposure incidents have occurred since Plaintiffs sent their
4 notice of intent. Most of the exposed individuals continue to work at the site and
5 are concerned about the health effects they have or may experience as well as their
6 risk of future endangerment.

7 62. DOE and WRPS continue to inadequately monitor and sample for
8 vapor releases and also continue to inadequately protect individuals from these
9 toxic vapors. Supplied air personal protective equipment (PPE) is neither required
10 nor freely available for work conducted in all areas of the tank farms and workers'
11 sense of smell is relied upon as the first tool of detection. Reliance on the workers'
12 sense of smell means that oftentimes by the time vapors are detected exposure has
13 already occurred.

14 63. When workers experience symptoms such as loss of consciousness or
15 even dizziness and difficulty breathing, the risk of mishaps and incidents which
16 could result in injury or radiological release in the Tank Farms increases.

17 64. The most recent vapor incident to date occurred Friday, August 14,
18 2015 when at least two workers in the SY double-shell Tank Farm experienced
19 symptoms of exposure to toxic chemical vapors. Approximately thirty minutes after
20 the first worker noticed a chemical smell the second worker's nose started to

1 bleed. Both workers were sent to the Hanford on-site medical clinic where their
2 blood was drawn. The worker who experienced the nose bleed ended up in the
3 hospital overnight due to dizziness and difficulty breathing.

4 65. Because of repeated and ongoing exposure incidents, Local 598
5 members currently request supplied air when conducting work in the Tank
6 Farms. By doing so, they risk losing job opportunities. At least one sub-contractor
7 has indicated in a recent request for proposals that it will hire only those individuals
8 who are willing to take the risk of working in Hanford's Tank Farms without
9 supplied air, because the sub-contractor believes that this protective measure
10 reduces worker productivity and increases its costs.

11 66. Workers have also smelled chemicals and experienced exposures
12 outside of the fenced-off tank farm areas known as "vapor protection zones."
13 Employees are not monitored outside of the tank farm areas.

14 67. The vapors released from Hanford's tanks have endangered and may
15 continue to endanger public health and the environment downwind of the tank
16 farms, which are only enclosed by chain link fences. There are public tours, guests,
17 regulators, additional contractors and workers at other areas of the Hanford site
18 who often go close to or downwind from the Tank Farms. As recently as October 1,
19 2014 a worker who smelled an odor outside the perimeter of C Tank Farm
20 developed symptoms overnight.

1 68. The downwind environment and the health of other individuals also
2 face imminent and substantial endangerment from the activities and waste
3 management described herein.

4 **VIII. CLAIM FOR RELIEF**

5 **WRPS and DOE are contributing to the present handling, storage,**
6 **treatment, transportation and/or disposal of hazardous waste which may**
7 **present an imminent and substantial endangerment to health and the**
8 **environment.**

9 A. Plaintiffs incorporate by reference allegations of the preceding
10 paragraphs of this Complaint.

11 B. Pursuant to 42 U.S.C. § 6903(15), Defendants are “persons” subject to
12 the citizen suit provisions of RCRA, 42 U.S.C. § 6972.

13 C. Defendants have contributed to and are contributing to the treatment,
14 handling, storage, transportation, and disposal of the wastes at the Hanford Site.

15 D. Defendants’ treatment, handling, storage, transportation, and disposal
16 of the wastes at the Hanford Site present an imminent and substantial
17 endangerment to public health and the environment as those terms are used in
18 Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B).
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20

IX. RELIEF REQUESTED

WHEREFORE, Citizens respectfully request that the Court enter a judgment containing:

1. Declaratory relief that Defendants' past and/or present generation, handling, storage, treatment, transportation, and/or disposal of solid waste presents, or may present, an imminent and substantial endangerment to public health and/or to the environment;

2. Preliminary and permanent injunctive relief ordering USDOE and WRPS to institute protective measures immediately, including but not limited to increased access to and requirements for use of supplied air PPE and changes to Hanford's Industrial Hygiene program, to prevent endangerment to the health of Hanford workers from exposure to toxic vapors.

3. Injunctive relief ordering the timely implementation of the recommendations and changes detailed in the 2014 Hanford Tank Vapor Assessment Team Report.

4. Injunctive relief ordering the implementation of ongoing independent expert oversight and assessments of Hanford's Industrial Hygiene Program including but not limited to implementation of the employee training, sampling

1 and monitoring protocols, quality control and quality assurance, worker protection
2 policies, and personal protective equipment.

3 5. Injunctive relief ordering USDOE and WRPS to conduct ongoing
4 comprehensive medical monitoring for past and present Hanford Workers.

5 6. Injunctive relief ordering the communication of complete information
6 about exposure incidents to workers and the public.

7 7. An effective, enforceable order to ensure the lasting abatement of
8 imminent and substantial endangerment to health and the environment that
9 escaping vapors present, consistent with the recommendations of the 2014
10 Hanford Tank Vapor Assessment Report and the Notice of Intent attached as
11 Exhibit A and incorporated by reference herein.

12 8. An order requiring Defendants to pay Plaintiffs' reasonable attorneys'
13 fees, expert witness fees, and costs incurred in prosecuting this action pursuant to
14 42 U.S.C. § 6972(e) and 28 U.S.C. § 2412(d), and in overseeing the Court's
15 remedy; and
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17 9. Such other relief as the Court deems just and proper.
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1 RESPECTFULLY SUBMITTED this 2nd day of September, 2015.

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